Math 17B: Calculus for Biology and Medicine (Second Quarter)
Winter Quarter 2023 at UC Davis

(Tentative) Schedule:
Disclaimer: The following schedule is tentative, and there may be changes. I will send an announcement on Canvas to notify students of any changes.
Also see the department syllabus for Math 17B (https://www.math.ucdavis.edu/courses/syllabus_detail?cm_id=8).

Lecture 1: Antiderivatives, solutions of initial value problems, areas, distances.
Lecture 2: Definite integrals.
Lecture 3: Midpoint rule.
Lecture 4: Fundamental Theorem of Calculus.
Lecture 5: Integration by substitution.
Lecture 6: Integration by parts.
Lecture 7: Partial fractions; tables of integrals.
Lecture 8: Improper integrals.
Lecture 9: Area between curves, average value.
Lecture 10: Further applications to biology.
Lecture 11: Volumes.
Lecture 12: Modeling with differential equations, solving pure-time differential equations.
Lecture 13: Phase plots, equilibria, stability of equilibria.
MIDTERM 1
Lecture 14: Separable differential equations.
Lecture 15: Solving first-order linear non-autonomous differential equations using integrating factors.
Lecture 16: Direction fields and Euler's method or Systems of autonomous ODEs.
Lecture 17: Coordinate systems, vectors.
Lecture 18: Vector operations.
Lecture 19: Matrices, matrix multiplication.
Lecture 20: Systems of difference equations.
Lecture 21: Inverses and determinants of matrices.
Lecture 22: Eigenvalues.
Lecture 23: Eigenvectors**.**
MIDTERM 2
Lecture 24: Iterated matrix models.
Lecture 25: Catch-up/Review.
Lecture 26: Catch-up/Review.
FINAL EXAM

JANUARY						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
1	2	3	4	5	6	7
8	9 Lecture 1	10	11 Lecture 2	12	13 Lecture 3	14
15	16 HOLIDAY	17	18 Lecture 4 Homework 1 due by 10:00pm (on Gradescope) Technology Assignment (optional) due by 10:00pm (on Gradescope)	19	20 Lecture 5	21
22	23 Lecture 6 Homework 2 due by 10:00pm (on Gradescope)	24	25 Lecture 7	26	27 Lecture 8	28
29	30 Lecture 9 Homework 3 due by 10:00pm (on Gradescope)	31				

FEBRUARY						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
			1 Lecture 10	2	3 Lecture 11	4
5	6 Lecture 12 Homework 4 due by 10:00pm (on Gradescope)	7	8 Lecture 13	9	10 **MIDTERM 1**	11
12	13 Lecture 14 Homework 5 due by 10:00pm (on Gradescope)	14	15 Lecture 15	16	17 Lecture 16	18
19	20 HOLIDAY	21	22 Lecture 17 Homework 6 due by 10:00pm (on Gradescope)	23	24 Lecture 18	25
26	27 Lecture 19 Homework 7 due by 10:00pm (on Gradescope)	28				

MARCH						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
			1 Lecture 20	2	3 Lecture 21	4
5	6 Lecture 22 Homework 8 due by 10:00pm (on Gradescope)	7	8 Lecture 23	9	10 **MIDTERM 2**	11
12	13 Lecture 24 Homework 9 due by 10:00pm (on Gradescope)	14	15 Lecture 25	16	17 Lecture 26	18
19	20	21 **FINAL EXAM** 10:30am-12:30pm	22	23	24	25